

---

ANNUAL REPORT ON THE ENVIRONMENT

**CHAPTER VI**

**HAZARDOUS  
MATERIALS**

---



## **VI. HAZARDOUS MATERIALS**

### **A. ISSUES AND OVERVIEW**

#### **1. Overview**

Fairfax County hazardous materials (HAZMAT) concerns may be considered less significant as compared to other jurisdictions; the industrial base within the County is relatively “clean.” Nevertheless, the County does have its share of problems. The main concerns are hazardous materials incidents involving spills, leaks, transportation accidents, ruptures, or other types of emergency discharges. Secondary is the use and disposal of hazardous materials in either daily household activities or by small quantity commercial generators. The final concern is the clean up and regulation of hazardous materials.

Although the news media is constantly reporting industrial and transportation related hazardous materials incidents, there is a general lack of awareness by the public of health and safety risks associated with the use, storage, and disposal of common household hazardous materials. Educating the public on the implications of these hazardous materials on peoples’ lives remains a significant goal.

#### **2. Hazardous Materials Incidents**

##### **a. Overview of 2002 Hazardous Materials Incidents**

The Hazardous Materials and Investigative Services Section personnel respond to reported incidents and investigate complaints of potential and actual releases, many of a non-emergency nature. During CY 2002, Staff was involved with 476 complaints. Fifty-nine complaints were petroleum product releases and 35 complaints were various types of other product releases that had the potential to discharge materials into storm drains or surface waters. Many of these occurrences were the result of motor vehicle accidents that involved damaged fuel tanks and other automotive type fluid releases. In addition, 36 reports of improper disposal of various hazardous materials and solid waste were addressed. (1)

##### **b. Hazmat Response Team Information**

The Fire and Rescue Department’s Operations and/or Hazardous Materials and Investigative Services Section respond to all reported incidents of hazardous materials releases, spills, and discharges. The County has a well-equipped Hazardous Materials Response Team. The primary unit operates

from Fire Station 34 in Oakton and three satellite units are stationed at Fire Station 1 in McLean, Fire Station 11 in Alexandria, and Fire Station 26 in Springfield. These units are strategically positioned to provide rapid response and adequate coverage throughout Fairfax County. Response personnel are trained and equipped to initiate product control and mitigation measures to prevent or minimize the adverse environmental impact and damage. All units are staffed 24 hours per day, seven days per week. The primary unit became fully staffed in 2002 to assist with the increasing number of responses.

The Hazardous Materials Response Team responded to more than 750 incidents in CY 2002. These incidents included the release of products into the air, water, and soil. The majority of the incidents continue to be hydrocarbon and corrosive releases. In addition, there were hundreds of small releases involving products such as gasoline, diesel fuel, antifreeze, and hydraulic fluid that were handled by first responder units. The Team conducted regular training sessions, as well as practical exercises, with surrounding jurisdictions, as well as state and federal agencies.

In addition to the efforts of the Operations Division and Hazardous Materials Investigative Services Section personnel, the Fire and Rescue Department maintains a contract with a major commercial hazardous materials response company to provide additional support for large-scale incidents. The Fire and Rescue Department is committed to protecting the environment and the citizens through proper enforcement of the Code or rapid identification, containment, and cleanup of hazardous materials incidents. (1)

### **3. Hazardous Materials in the Waste Stream**

The disposal of household and small quantities of non-household hazardous materials into the waste stream continues to be a concern. Unlike hazardous materials incidents, the immediate impact is not as dangerous. However, the long-term impact can be just as severe. Hazardous materials in the waste stream are contaminating landfills. Sometimes, hazardous materials are dumped illegally, which leads to stream and groundwater pollution and soil contamination. Household hazardous wastes are products used in and around the home that are flammable, corrosive, reactive, or toxic. These hazardous materials potentially can cause a safety problem if various household chemicals become mixed when disposed of with the regular trash. By disposing of household hazardous wastes separately in the appropriate manner, these materials can be properly handled and packaged to minimize exposure to potentially harmful chemicals and to decrease the likelihood that these chemicals will enter the environment.

**a. Used Automotive Oil and Fluids**

A recent year-long study by the Northern Virginia Planning District Commission (NVPDC, now the Northern Virginia Regional Commission, or NVRC) for the Department of Environmental Quality estimates that approximately three to 4.5 million gallons of used oil, and approximately one million gallons of antifreeze, are “lost” in the environment each year through improper disposal by “do-it-yourselfers,” or DIYers. DIYers change their own automotive fluids (including oil, oil filters, and antifreeze) and account for 40 to 50% of those owning passenger cars. Only 15 to 30% of DIYers are believed to properly recycle or dispose of used oil. One percent or less of DIYers recycle oil filters.

This study resulted in a recommendation to reestablish a Statewide used oil recycling program aimed at capturing what amounts to the 1989 Exxon Valdez oil spill every four years. As a part of the study, NVPDC developed a database of all known collection centers in Virginia – 471 private and 125 public. The study also revealed that there are about the same number of collection facilities in 1999 as in the late 1980s; however, the volume of oil generated has increased roughly 100,000 gallons per year because of more cars on the road. Convenience and public education were found to be major factors in whether DIYers recycle or not. (2)

**b. Dumping into Storm Drains**

Storm drains carry stormwater runoff from streets (see the Water Resources chapter of this report). This water is not treated and goes directly into local streams. All streams in Fairfax County eventually flow into the Potomac River, which empties into the Chesapeake Bay. Anything dumped down a storm drain will follow the same path as the stormwater runoff. (3)

The cleaning up of animal wastes and the disposal of such wastes down storm drains, as well as the disposal of leaves down the storm drains, are attempts at doing a service that have the effect of introducing pollutants directly into County streams. There are deliberate disposals of chemicals, oils, and other items into the storm drains as “out-of-site, out-of-mind.” In either situation, there is a misperception that the storm drains are part of the County sewage system and that the disposal of materials down these drains does not provide a direct impact to the environment.

## **4. Pipelines**

The following was reported by the Fairfax Joint Local Emergency Planning Committee:

“More than 3,000 companies operate some 1.9 million miles of natural gas and hazardous liquid pipelines in the United States. The pipeline network includes 302,000 miles of natural gas transmission pipelines operated by 1,220 firms, and 155,000 miles are hazardous liquid transmission pipelines operated by 220 outfits. In addition to transmission pipelines, 94 liquefied natural gas facilities operate in the United States.” (4)

Pipelines traverse Fairfax County carrying refined petroleum for two companies and natural gas for three companies. The Office of Pipeline Safety in the U.S. Department of Transportation regulates pipeline design and the construction, operation, and maintenance of pipelines to ensure safe transportation of hazardous liquids and natural gas. (5)

## **5. Rail Transport of Hazardous Materials**

Chemicals and materials that are hazardous have regularly been transported by rail. Accidents or leaks have been, and continue to be, a cause for concern. Post September 11 has introduced additional concerns.

Potential future shipments of nuclear radioactive waste by rail (and by truck) will travel through parts of the Washington, D.C. metropolitan area. Should an accidental or intentional incident occur, the effects and impacts could extend beyond that initial area.

The July 18, 2001 CSX Train fire in a Baltimore, Maryland tunnel was an unintended incident involving a train car with hazardous materials and had wide-range, long-term consequences. Major sections of the downtown were closed, businesses were impacted, Orioles' games had to be rescheduled, and portions of a major street were closed for five weeks.

Rail through Fairfax County is in the eastern and southern portions of the County and does not include tunnels. Residents are generally not located as close to the rails in Fairfax County as in other jurisdictions. However, some hazardous materials, alone or in combination, when released can affect areas up to miles from the initial site of the incident. It is conceivable that Fairfax County residents could be impacted with hazardous materials from a rail incident in another jurisdiction.

## **B. PROGRAMS, PROJECTS, AND ANALYSES**

### **1. Fairfax Joint Local Emergency Planning Committee (FJLEPC)**

Local Emergency Planning Committees are required by Section 301[c] of Title III of the Emergency Planning and Community Right-to-Know Act (EPCRA), a freestanding provision of the Superfund Amendments and Reauthorization Act of 1986 (SARA). The main thrust of SARA is to identify and clean up waste sites that are potentially toxic. Title III has two important provisions: 1) it provides for emergency response planning to cope with the accidental release of toxic chemicals into the air, land, and water; and 2) the community right-to-know provisions of Title III help to increase the public's knowledge and access to information on the presence of hazardous chemicals in their communities and releases of these chemicals into the environment. Under Title III, states are required to organize into planning areas and to establish local Emergency Planning Committees.

The FJLEPC is comprised of representatives of the City of Fairfax, the County of Fairfax, the Town of Herndon and the Town of Vienna. Committee members include local government officials, police, fire and rescue officials, environmental and governmental planners, public health professionals, hospital officials, public utility and transportation officials, representatives of business organizations, professional societies, civic organizations, and the media. These representative meet six times a year. The FJLEPC collects information about hazardous materials; develops and updates, on an annual basis, the Hazardous Materials Emergency Response Plan (Plan); and provides information to the public about the use, storage, and manufacture of hazardous materials. The Plan also contains notification procedures in the event of an incident, on site means of detecting incidents, evacuation routes, clean-up resources, and identification of parties responsible for the site.

FJLEPC provides education and outreach to the public. Information is disseminated through public meetings, brochures, newsletters, and a Web site: <http://www.lepcfairfax.org>. During 2002, two newsletters were mailed to over 1,600 homeowner associations, members represented the Committee at various County and neighborhood functions including Fall for Fairfax, and work was started on updating the Web site and brochures. FJLEPC members are available to speak to businesses or citizens groups, as requested. (1)

### **2. Railroad Transportation Plan**

The CSX Transportation, Hazardous Material Systems, has a hazardous material emergency response plan. A written copy of that plan is on file with FJLEPC and the Fairfax County Fire & Rescue Hazmat Station 34. The Web site for CSX is: [www.csx.com](http://www.csx.com)

### **3. Storm Drain Stenciling Program**

The Northern Virginia Soil and Water Conservation District (NVSWCD) has a Storm Drain Stenciling Program which encourages youth and community groups to educate the public about the dangers of dumping anything into storm drains. This is a two-part program that includes education and stenciling of the drains. The mandatory educational component must be completed prior to stenciling; it includes distributing flyers to all homes in the neighborhood regarding how to properly dispose of household and pet waste, yard debris, and used motor oil. Trained volunteers then stencil “Dumping Pollutes – Drains to Stream” on storm water inlets in pre-approved (Virginia Department of Transportation--VDOT) areas. This program has proven to be an effective, low-cost method of educating large segments of the population about water quality problems.

### **4. Household Hazardous Waste Program (HHW)**

Fairfax County operates permanent HHW collection centers as a part of its recycling program for residents of Fairfax County. Information on the locations, hours of operation, types of wastes accepted, and how to dispose of the wastes can be found on the County’s Web site [www.co.fairfax.va.us](http://www.co.fairfax.va.us). This information can be found under Public Works and Utilities and under Environment.

Participation in the HHW collection program has resulted in many items being disposed of at the centers that are not hazardous waste. In addition to the confusion of what should be recycled as HHW, the inconvenience of not having collection sites located throughout the County may be affecting the participation.

In FY 2002, there were 16,272 participants disposing of 368,060 pounds of HHW. This included 5,955 gallons of antifreeze, 76,007 gallons of motor oil, 6,197 lead acid battery cores, and 59,980 gallons (or 150 tons) of latex paint. This is a slight increase from FY 2001, when there were 15,312 participants disposing of 356,275 pounds of HHW. That included 6,250 gallons of antifreeze, 59,868 gallons of motor oil, and 57,375 gallons of latex paint. FY 2001’s totals are approximately the same as the totals for the three preceding years. (6) Considering the population and business growth in the County during this five-year period, HHW recycling does not seem to be keeping pace.

### **5. Commercial Hazardous Wastes**

The Conditionally Exempt Small Quantity Generator (CESQG) program has been reestablished on a limited basis. A CESQG is any business that generates less than 220 pounds or 27 gallons of HAZMAT during a month. There is a fee for disposal of HAZMAT that the CESQG pays directly to the contractor

operating this program. Commercial hazardous waste generators that do not qualify as CESQGs should look to commercial hazardous waste disposal companies for support. For more information about CESQG and a list of commercial hazardous waste disposal companies, access the County's Web site.  
(7)

## C. REPORTING ENVIRONMENTAL CONCERNS AND ISSUES

Environmental issues affect everyone living and working in the County. All environmental concerns and events negatively impacting the County should be reported. A list of contact information relating to environmental crimes is provided in Table VI-1 below.

<b>Table VI-1</b>	
<b>HOW TO REPORT ENVIRONMENTAL CRIMES</b>	
<b><u>Type of Incident</u></b>	<b><u>Phone Number</u></b>
<b><u>ANY ACTIVE RELEASE OF MATERIALS INTO THE ENVIRONMENT</u></b> If the dumping of any substance into a stream, into a manhole, into a storm sewer, or onto the ground is witnessed, assumptions regarding the contents of the materials should not be made. 911 should be called immediately. When calling 911, be prepared to provide specific information regarding the location and nature of the incident. The local office of the U.S. Environmental Protection Agency (703-235-1113) can be called in addition to (but not instead of) 911.	<b>911</b>
<b><u>HAZARDOUS MATERIALS-DANGEROUS</u></b> If a suspected hazardous substance is being released, if lives are in danger, or if property is threatened, 911 should be called immediately. It is also appropriate to call 911 anytime an active release is witnessed.	<b>911</b>

<b>Table VI-1 (continued)</b>	
<b>HOW TO REPORT ENVIRONMENTAL CRIMES</b>	
<b><u>Type of Incident</u></b>	<b><u>Phone Number</u></b>
<b><u>HAZARDOUS MATERIALS-NO IMMEDIATE DANGER</u></b>  If a known discharge of hazardous materials has occurred in the past and no lives or property are in immediate danger, this must be reported to the Fairfax County Fire and Rescue Department's Hazardous Materials and Investigative Services Section at this number (includes Towns of Clifton, Herndon, and Vienna). If there is any question about whether a release may still be active or whether there may be any immediate danger, 911 should be called.	During working hours, call: <b>703-246-4386</b>  After hours, call: <b>703-691-2131</b>
<b><u>RELEASE OF ANY MATERIAL INTO THE ENVIRONMENT</u></b>  Any release of materials into the environment, whether hazardous or not, should be reported to the Northern Regional Office of the Virginia Department of Environmental Quality at this number. If the release is an active one, call 911.	<b>703-583-3800</b>
<b><u>EROSION AND SEDIMENTATION</u></b>  If the illegal removal of trees, the illegal clearing of land, and/or the illegal dumping of fill is suspected, contact Fairfax County's Code Enforcement Division at this number. This number should also be contacted if siltation and other harmful effects of construction activity are occurring or observed on neighboring lands and waterways. All calls received during non-working hours will be responded to during the next business day.	<b>703-324-1937</b>
<b><u>HEALTH HAZARDS</u></b>  In addition to the above contacts, if a health hazard is suspected, contact the Environmental Health Administration at this number. The Health Department's Community Health and Safety Section (703-246-2300) can also be called. Asbestos-specific releases should also be reported to the Health Department.	<b>703-246-2205</b>

## **D. LEGISLATIVE UPDATE**

During 2002, there were no legislative issues and/or hazardous materials changes with regard to hazardous materials.

The U.S. Department of Transportation was involved with reviewing hazardous materials regulations pertaining to the commercial driver license qualifications and in-transit security for hazardous material cargo as a result of the terrorists' attacks on September 11, 2001. Some rule changes from those reviews can be expected to be finalized in 2003. (1)

## **E. RECOMMENDATIONS**

1. EQAC continues to recommends an aggressive public education campaign on how to properly dispose of household/residential, commercial, and industrial hazardous waste. Initially, the "Household Hazardous Waste Disposal Program" flyer that is now available at the West Ox Road and the I-95 Facilities can be used. It is suggested the County pursue partnering with the Northern Virginia Board of Realtors and request they participate by distributing the flyer to all new residents they work with. New residents would be anybody buying or renting a house, townhouse condominium.
2. Financing for the printing of Hazardous Waste and Environmental Crime materials might be available through Federal grants with the Emergency Management Program. It is suggested the County discuss the possibilities with Fire and Rescue, FJLEPC, and the Emergency Management Coordinator.
3. Environmental crimes require citizens' eyes. EQAC recommends an advertisement and educational campaign to state what types of hazardous materials and other environmental situations citizens are requested to report including who they are to contact. This could be done through community association newsletters, press release stories to the media, and age appropriate material sent home through the schools.

## **REFERENCES**

1. Fairfax County Fire & Rescue, Chief Michael P. Neuhard, June 19, 2003 memo.
2. Northern Virginia Planning District Commission, *Nvironment*, Vol.12, Number 1, Fall 1999, p1.
3. Northern Virginia Soil & Water Conservation District, *1999-2000 Annual Report*, page 10.

4. *LEPC Connection: A Virginia Local Emergency Planning Committee Newsletter*, Fall 2000, p 1.
5. Fairfax Joint Local Emergency Planning Committee
6. Fairfax County Division of Solid Waste, Disposal and Resource Recover, HHW Disposal Program, Cliff Taylor, June 30, 2002 memo
7. Fairfax County Web site:  
[www.co.fairfax.va.us/dpwes/trash/disposal%Fhazcommer.htm](http://www.co.fairfax.va.us/dpwes/trash/disposal%Fhazcommer.htm)
8. Previous EQAC authors of this chapter and material